UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH ADMINISTRATION
BUREAU OF AGRICULTURAL AND INDUSTRIAL CHEMISTRY
PEORIA 5, ILLINOIS
Northern Regional Research Laboratory

answ. 13 March.

February 21, 1946

Mr. Joshua Lederburg
% Mrs. E. Schrag
Columbia University
Department of Zoology
New York, New York

Dear Mr. Lederburg:

I shall be glad to send you cultures of the normal and agglutinative forms of Schizosaccharomyces versatilis NRRL y-1026 as requested in your letter of February 6, 1946. I cannot give you specific information on the genetics or characteristics of strains derived from isolated spores as we have not studied the species in this respect. However, I shall give you what information I can on the points you discussed.

1. The spores will have to be isolated before the ascus ruptures if you desire to know the source of all spores worked with. Since all asci with a full complement of eight spores will break of its own accord, the intact ascus may be isolated and allowed to rupture of its own accord. The spores should be easily isolated since they are produced in large numbers.

The vegetative cells of species of Schizosaccharomyces are much more resistant to heat than the vegetative cells of yeasts in general, but I do not know how much more resistant the spores are than the vegetative cells.

2. We have no information on the number of chromosomes or characteristics of meiosis.

3. Some factor in addition to the ordinary B vitamins is necessary to the best development of this yeast, but we do not know what it is. However, this yeast will grow well on potato-dextrose, wort, and to less extent on yeast extract medium.

what are ordinary B-vits?

4. The agglutinative form is the only mutation we have observed other than a marked variation in growth rates of different colonies on some media. This may reflect variations in the ability to synthesize needed growth factors.

Should you desire to study the nucleus of this species, I would suggest that you use the coverglass type of culture described in the paper, for this way you can observe the growing culture from time to time and use the cells when the nuclei are most clearly visible in the surrounding vacuole. The coverglass may be removed to give free access to the cells observed.

We shall send you a reprint when they are on hand.

Sincerely yours, Lynferd J. Wickerham

Lynferd J. Wickerham, Zymologist,
Fermentation Division